

THURSDAY, AUGUST 16, 1883

RECENT TRAVEL IN EASTERN ASIA

The Golden Chersonese. By Isabella L. Bird. (London : John Murray, 1883.)

Across Chrysé; being the Narrative of a Journey of Exploration through the South China Border Lands from Canton to Mandalay. By Archibald R. Colquhoun. Two Vols. (London : Sampson Low, 1883.)

Among the Mongols. By the Rev. James Gilmour. (London : Religious Tract Society, 1883.)

Eight Years in Japan, 1873-1881. Work, Travel, and Recreation. By E. G. Holtham, M.Inst.C.E. (London : Kegan Paul, Trench, and Co., 1883.)

WHEN Miss Bird last took leave of her readers, steaming away from the coasts of Japan, her labours and wanderings were by no means over. In this volume she takes up the thread of her narrative exactly where she dropped it in her last book, and we find ourselves with her again just where we parted before, and pay visits first to Hong Kong and then to Canton before starting for the newer ground. If this volume at all falls short in the interest and, we may say, importance of the last, it is owing alone to the Malayan peninsula falling so far short of Japan in both its interesting ancient and marvellous modern history. It is as fresh ground as Japan : for of the eastern half of the peninsula nothing is known but the coast line. Yet commerce promises to open it up ; for the export and import trade of the Straits Settlements amounted together in 1880 to £32,353,000. Ironstone, containing 60 per cent. of metal, is said to be used for macadamising the roads at Singapore ; and the vastest tin fields in the world are found in the western Malay States.

Miss Bird sailed from a leaden stormy sky on the Pacific into the sunny harbour of Hong Kong to find the town on fire, an incident giving early employment to her graphic pen. Her remarks that, whenever the rocks are quarried there, fever breaks out, is one on which further observations would be valuable. Miss Bird reports also that the Hong Kong hospital doctors have drugs which throw patients into a profound sleep, during which the most severe operations can be painlessly performed, and from which the patients awake without even a headache.

From Hong Kong she makes an excursion to Canton, where her "admiration and amazement never cease." We must remark that the simple exercise of the faculty of seeing seems to give an unusually intense pleasure to Miss Bird. Further on she describes the rough life she led as "very enchanting," even where she owns that the redundancy of insect and reptile life certainly was oppressive ! The river population, though looked down upon by the land-dwellers, seem as usual to have been sharpened and improved by the struggle for existence ; at any rate Miss Bird seems to prefer their women. Miss Bird stops in the neighbourhood of a Cochin Chinese village where river boats are more crowded than at Canton. Among other low characteristics of the "hideous" inhabitants she notes a wide separation of the great toe from the rest.

VOL. XXVIII.—NO. 720

In the seas about Singapore there is "nothing scanty, feeble, or pale," while on land she finds a perpetual struggle between man and the jungle, and a power of vegetation which must be a source of wealth to the former when he has numbers and energy to control it. The average temperature there is 80° F., with no greater range in any part than 24° : moist and uniform. This moisture adds greatly to the oppressiveness of the heat—nowhere else did Miss Bird feel it so overpowering as in a canoe on a river at night—but our traveller is one who can feel mere living to be a luxury with the thermometer at 88°, and her powers of endurance are shown by the early collapse of one of the only two companions she made in any part of her journey, although the daughter of the Resident at Malacca. This town is now out of the line of traffic, and Miss Bird describes in equal wealth of words its monotonous silence and sleepiness, and the impression and fascination it produced upon her. It is only 2° north of the equator, and the journeyings which commence from here are in small territories on the west coast of the Malayan peninsula, only 3° further north.

The jungle there is not an entanglement of profuse and matted scrub but a noble forest of majestic trees, many of them supported at their roots by three buttresses, behind which thirty men could find shelter. On many of the top branches of these other trees have taken root from seeds deposited by birds, and have attained considerable size. Under these giants stand the lesser trees grouped in glorious confusion. A long list of such is given, all of which are bound together by the rattan with its tough strands from 100 to 1200 feet in length. An enthusiastic description of magnificent tropical flowers follows here ; but elsewhere she reconciles her description with the different one which Mr. Wallace gives by remarking that "a traveller through a tropical jungle may see very few flowers, and be inclined to disparage it. It is necessary to go on adjacent rising ground and look down where trees and trailers are exhibiting their gorgeousness," "where indeed one has to look for most of the flowers." The silence and colourlessness of the heart of the forest, she tells us, and the colour, light, vivacity, and movement among the tree tops contrast most curiously. Even with the latter our masses of flowers, buttercups and daisies, gorse or heather, are compared favourably among very few things of home which are compared favourably with what she finds abroad.

Of the mangrove she notes that the seeds germinate while still attached to the branch—a long root pierces the covering and grows rapidly downwards from the heavy end of the fruit—which arrangement secures that when the fruit falls off the root shall become at once embedded in the mud ; of the cocoanut palm, that in loose sandy soil near the salt water it needs neither manure nor care of any kind, but if planted more than two hundred yards from the sea it requires manure or human habitation, and that its fruit takes fourteen months from the appearance of the blossom till the ripe fruit falls ; of the nutmeg that it grows like a nectarine on a tree forty or fifty feet high, with shining foliage. A ripe one open revealed the nutmeg, with its dark brown shell showing through its crimson reticulated envelope of mace, the whole lying in a bed of pure white, a beautiful object.

"The sensitive plant with its tripartite leaves, green

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above and brown below, is a fascinating plant, and at first one feels guilty of cruelty if one wounds its sensibilities. Touch any part of a leaf ever so lightly, and as quick as thought it rolls up. Touch the centre leaf of the three ever so lightly, and leaf and stalk fall smitten. Touch a branch and every leaf closes, and every stalk falls as if weighted with lead. Walk over it and you seem to have blasted the earth with a fiery tread, leaving desolation behind. Every trailing plant falls—the leaves closing show only their red-brown backs, and all the beauty has vanished ; but the burned and withered-looking earth is as fair as ever the next morning."

It is satisfactory to read that the elephant, so near extermination in Africa through the pursuit of the ivory trade, is still plentiful in these forest-covered interiors, though novelty seemed its only recommendation to Miss Bird as a beast of burden. Half a ton is considered a sufficient load for one if it be of metal, but if more bulky, from four to six hundredweight. In passing through the forest an elephant always puts his foot into the hole that another elephant's foot has made. They have the greatest horror of anything that looks like a fence ; and a slight one made of reeds usually keeps them out of padi, cane, and maize plantations. The insect which can draw blood from the wrinkled hide of an elephant is curiously small. The boiled or stewed trunk of the latter, we are told, tastes much like beef.

A most tender account is given of the living and dying of a tame monkey, which Miss Bird believes to be an "agile gibbon—a creature so delicate that it has never yet survived a voyage to England" ; and curiously human are the differences in disposition between different species of monkeys which she observes. When tamed by living with Europeans these apes acquire a great aversion to Malays.

Some small bright-eyed lizards which ran about her room went up the walls in search of flies. They dart upon the fly with very great speed, but just as you think they are about to swallow him, they pause for a second or two and then make the spring. "I have never seen a fly escape during this pause, which looks as if the lizard charmed or petrified his victim." The Malays have a proverb based upon this fact : "Even the lizard gives the fly time to pray." One evening Miss Bird found seventeen lizards in her room and two in her slippers !

A snake about 8 feet long has gained its name of a "two-headed snake" because after the proper head is dead the tail will stand up and move forwards.

An interesting account is given of a column of ants, officered by larger ones, making their way to the stump of a tree from which the outer layer of bark had been removed, leaving an under layer apparently permeated with a rich sweet secretion, which a quantity of reddish ants of much larger size and with large mandibles were engaged in stripping off. The large pieces which they dropped were broken up and carried away by the smaller ants round the base. Other proceedings which she describes seemed inscrutable to Miss Bird.

Among the gorgeous butterflies, Miss Bird describes one with the upper part of its wings of jet black velvet, and the lower half of its body and the under side of its wings of peacock-blue velvet, spotted ; another of the same "make" but with gold instead of blue ; and a third with the upper part of the body and wings white with erise spots. All these measured full five inches across

their expanded wings. In one opening of the forest only she counted thirty-seven varieties of these brilliant creatures, not in hundreds, but in thousands, mixed up with the blue and crimson dragon-flies, and iridescent flies all joyous in the sunshine. Many birds rival them in beauty of plumage, though some resemble less brilliant European species.

The Malays are fond of animal pets ; their low voices and gentle supple movements never shock the timid sensitiveness of brutes. A bird called a mina articulated so plainly that Miss Bird did not know whether a bird or a Malay spoke. Monkeys gather cocoanuts to order for their masters.

The Malays have an elaborate civilisation, laws, and even a literature of their own. They are a decently clothed, comfortably housed, settled, agricultural people, skilful in some arts, especially the working of gold, and they are rigid monotheists. Their houses show good work in lattice and bamboo, carved doorways, and portières of red silk, pillows and cushions of gold embroidery laid over exquisitely fine matting on the floors. Yet Miss Bird says that with no visible reason they have been dwindling away for several generations, and if they were swept away to-morrow not a trace of them except their metal work would be found. But nothing impresses itself so often or so strongly upon Miss Bird as the energy, enterprise, and large emigration of the Chinese. Most of her remarks about them might be thought to apply to the English ; and indeed, so far from wishing to correct such an impression, she asserts that "to say that the Chinese make as good emigrants as the British is barely to give them their due. They have equal stamina and are more industrious and thrifty." Though the old hatred of foreigners in their native country does not pass away from them, and Miss Bird heard them mutter the phrase of "foreign devils" as she passed along the streets of Canton, yet the Chinese who are born in the Straits glory in being British-born subjects, and despise the immigrant Chinese. The principal result of British rule seems likely to be, from Miss Bird's account, that the Chinaman, striving, thriving, and oblivious of everything but his own interests, will soon overspread the whole of the Far East. Singapore is to all appearance a Chinese town, with 86,766 Chinese against 1283 European residents.

We think no one can help enjoying this happy traveller's book ; though few would be led to think they would enjoy the same journey as thoroughly as she describes doing. One adjective fairly describes all her descriptions of what she meets with—they are superlative !

Mr. Colquhoun's object in undertaking the journey which he records in these two portly volumes, was to find a trade route from Rangoon through Burmah and the Shan States into South-western China. His attention was attracted to this subject by a previous journey to Zimmé or Kiang-mai on the Me Ping, and he accordingly decided to devote his first leave of absence from his official duties in India to attacking his task from the Chinese side. Briefly, then, he went up the Si Kiang, or Canton River, from its mouth to Pêse, near the borders of Yunnan, and travelled through the southern districts of this province, passing the great towns Kaihua, Linan, and Puerh to Ssumao, immediately on the border of the independent

Shan States, the real goal of his journey. Here, where the most interesting part of his work was to commence, and when he had overcome many obstacles, he found himself compelled to abandon his plan by the refusal of his interpreter to proceed into these strange regions. It is not difficult to understand the bitter disappointment with which he turned northwards, when only a few weeks' journey from Zimmé, and passing almost across Yunnan to Tali, he took the usual route of Gill, Margary, and others through Manwyne and Bhamo, and thence by the Irrawaddy to Mandalay and British Burmah. It is to be hoped, not less in the interests of geography than of commerce, that Mr. Colquhoun may shortly be able to undertake the journey again, aided by the great commercial bodies of England; for we are bound to say that he exhibited throughout the journey many of the highest and most valuable qualities that a traveller can exhibit among strange peoples—patience in overcoming obstacles, unfailing good temper, tact in dealing with officials and with his own followers; and at the same time energy, industry, and skill in making and recording scientific observations. These volumes appear to have been written from day to day as the journey progressed, and this accounts for much repetition, and for an absence of arrangement which is none the less occasionally irritating. But how are we to account for the presence of illustrations in this important and scientific work of such hackneyed subjects as "Chinese Children," "Modes of Dressing the Hair," "Boats at Futshan," &c., such as may be found in any popular volume published on China during the last fifty years? They swell the size of the book, without in any degree adding to its interest or value. In fact, there was ample room for judicious pruning, and a single moderate-sized volume would have been sufficient to contain a full record of the journey, including the excellent maps, and the amusing sketches of the aboriginal tribes of Southern Yunnan. But we must not look our gift-horse too much in the mouth; and the faults to which we have adverted do not prevent Mr. Colquhoun's journey from being one of the most valuable contributions to our knowledge of the geography of China and its southern border-lands that we have had since Lagrée's adventurous journey up the Meikong and through Yunnan to the Yang-tsze about ten years ago. He appears to have settled the hydrography of many of the numerous rivers that flow from Yunnan through the Indo-Chinese peninsula, and his accounts of the various tribes inhabiting the southern borders of that province add much to ethnological knowledge. One fact, of great importance at the present time, which Mr. Colquhoun places beyond doubt is that the Songkoi River, which flows through Tonkin, and which the French regard as the future trade-route into South-western China, can never be used for that purpose with success. Its highest navigable point is cut off from the province by a range of lofty mountains, and when these are crossed, the district reached is a barren one. The real wealth of these regions appears to lie farther to the westward, about Puerh, Ssumao, and in the Independent Shan States, where the traveller found a busy and thriving trade. In the new journey which Mr. Colquhoun is about to undertake with more funds, and with other advantages which he did not possess last year, we are sure he will meet with the success which unfor-

tunate circumstances then snatched from him at the last moment.

Mr. Gilmour's volume is one of the most charming books about a strange people that we have read for many a day. There is much deficiency in the matter of dates, but we gather that he commenced his missionary labours in Mongolia about 1870, and that he is still connected with the Peking mission. He lived amongst this nomad people as one of themselves. He learned the language in a manner that would have approved itself to the late Prof. Palmer, and then he travelled over the vast tract of country lying between the great wall of China on the south and the Amour on the north, sometimes joining caravans, sometimes alone, now staying in Mongol tents, now pitching his own tent on the confines of an encampment, from which the people came out to visit and hear him, or to get from him foreign medicines, which they expected to work extraordinary cures. In addition Mr. Gilmour has lived in towns such as Kalgan, on the southern frontier of Mongolia, Urga and Kiachta, and appears even to have once gone as far as Irkutsk. As a result he knows the Mongols from the inside; he has penetrated into their superstitions, their religion and habits of life, and he therefore is never compelled to hammer out a little substance to cover a large space. Indeed his wealth of material would in some hands have easily been extended to two portly volumes. Of geographical information there is very little, except an account of a journey across Mongolia from Kalgan to Kiachta, on the Siberian frontier; but the customs, religion, superstitions, &c., of the inhabitants of Mongolia are fully described, and the volume may thus be of much value to the ethnologist and student of comparative culture. It is in addition written in a simple and most amusing way.

The complaint that our books on Japan for the general reader are written by "globe-trotters" and travellers who have spent but a short time in the country is in a fair way of being removed. Mr. Holtham's is the second volume published during the past two years in which a resident on his return home has given the public the benefit of his experiences. Mr. Holtham was employed as an engineer on the Japanese railways. For the first two years survey work took him up country, but when the Japanese Government found they were exceeding their funds in various directions, the projected railways were abandoned for the time being, and Mr. Holtham was called in to administer one or other of the two small railways then in actual running order. One of these he extended slowly till it reached Kioto; the other he succeeded in relaying. The nature of the experiences of an engineer surveying for railways may be guessed with tolerable accuracy, but Mr. Holtham tells his story in a quaint and humorous fashion which, if a little strained now and again, is as a rule very taking. In addition to what may be called the professional section of the volume, there are also records of various journeys in the interior, but none of these are on beaten tracks; and interspersed everywhere we find interesting and amusing comments on what was going on under the author's eye in society and politics in Japan. It may be commended especially to readers who desire, from whatever motive, to know the conditions under which the scientific and professional

man works under the Japanese Government. Many of these are exceedingly irritating, among them being the incompetence and presumption of native colleagues, who are fond of proceeding in what Mr. Holtham styles "the rough and ready heaven-born-genius-and-see-it-with-half-an-eye kind of way" in cases where his old-fashioned education led him to seek first carefully for facts. The author passes over unpleasantnesses such as these in a very kindly way, but there can, we believe, be no question that many most important elements of the true scientific spirit are sadly lacking in young Japan. Energy, thirst for knowledge, and ingenuity exist in abundance, but we are not so assured of the patience, and caution in research, and respect for the opinions of older and more experienced heads, which are also necessary. Hence, doubtless, we find so many promising schemes come to nought. It is more satisfactory to find that, in Mr. Holtham's opinion, the students who have been so carefully trained under excellent foreign teachers in the Imperial College of Engineering give great promise of subsequent practical usefulness. The foreign staff of the Japanese Railway Department has now been almost wholly replaced by natives, and it will be very interesting to watch the Japanese walking alone. A few years will show how far they were justified in getting rid of the men to whom they owe their substantial public works. However this may be, we can cordially recommend "Eight Years in Japan" as a very interesting and amusing book.

ELEMENTARY APPLIED MECHANICS

Elementary Applied Mechanics. Part II. By Thos. Alexander, C.E., and Arthur Watson Thomson, C.E., B.Sc. (London : Macmillan and Co., 1883.)

In this volume the authors have pursued the same course as that followed by Prof. Alexander in the first volume of his "Elementary Applied Mechanics," in giving an abundant commentary, illustrated by a large number of practical examples, of those parts of Rankine's "Applied Mechanics" which deal with transverse stresses and the shearing forces and bending moments on beams and cantilevers.

They have thus supplied a want which has long been felt both by teachers and students of a text-book which should treat applied mechanics in a way similar to that pursued in mathematical works.

The work before us is accurate and clearly written, and the explanations given are so full that it may be easily understood by any one whose mental powers are not so hopelessly deficient that he would be liable to incur responsibility for culpable homicide if he were to undertake to design or construct a bridge, or any sort of structure in which defects might be attended with risk to human life.

Thoroughly penetrated with the scientific spirit of Rankine's work, though happily with a more perfect acquaintance with the limits of average human intelligence, the authors have given at length the proofs of the formulæ belonging to this part of applied mechanics, and they have also examined carefully the various cases which occur owing to the different modes of loading a beam.

The results arrived at and the methods employed, many of which are new, have, in each case, been rendered more easy of apprehension by the addition of a solution

of the same question by simple graphical methods, nearly all of which depend, by a proper change in the scale on which vertical ordinates are measured, on the use of an invariable parabolic segment which is to be carefully constructed beforehand in wood or cardboard, and employed throughout.

By this means complicated questions on beams with both a dead and travelling load, can be easily dealt with, and the curves of bending moment and maximum bending moment readily drawn.

The mathematics employed are of the simplest character, not extending, except in one or two instances, beyond elementary algebra, whilst those properties of the parabola which are employed are previously proved in the form of lemmas.

But excellent as is the theoretical exposition of principles in the book, we are disposed to attach even greater importance to the large collection of examples scattered through it, in which the facts and formulæ of the text are applied to well chosen practical examples.

It has been a great misfortune, which all teachers of the subject have deplored, that the writers of books on it have spared themselves the labour of compiling a set of numerical examples, which would enable students to obtain that grasp of it which examples alone can give, and at the same time afford them the assurance that the formulæ they have been studying have some practical significance.

Those which are scattered through this work are judiciously selected, and they are accompanied, when necessary, by hints for their solution. We set a high value on this feature of the book, and we believe that a student, even though otherwise unassisted, who should carefully read it and conscientiously work through the examples, would acquire a knowledge, theoretically sound and practically useful, of this part of applied mechanics which he could not gain with the same labour and in the same time from the study of any other book which has been published on the subject.

J. F. MAIN

OUR BOOK SHELF

Text-Book of Physics. By J. D. Everett, M.A., D.C.L., F.R.S. Illustrated. (Glasgow : Blackie and Son, 1883.)

THIS book of 300 pages well fulfils the author's intention of providing an elementary text-book which may especially serve as an introduction to the well-known work of Deschanel with which his name is associated. It is full of matter, which is presented to the reader in a thoroughly systematised and acceptable condition.

The definitions, we need hardly say, are excellent and well worthy of the reputation of one who has taken a prominent part in scientific definition and terminology. Indeed we have rarely seen the chief points of scientific interest so clearly explained as they are in this volume.

We give the following as a good illustration (p. 119) :

"Fuel is a reservoir of potential energy, inasmuch as its elements are ready, whenever opportunity is given, to unite with the oxygen of the air and develop a large amount of heat. The words 'whenever opportunity is given' require some explanation. . . . If we have a large stone lying near the edge of a precipice 1000 feet deep, the stone will not move over of itself, but is ready to fall when opportunity is given, and a trifling expenditure of work in moving the stone to the edge will enable it to descend to the foot with terrific violence. . . . In the firing of a gun there is a combination of illustrations of